GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

TWD – EDN - Implementation of Energy Efficiency Project in all the School and Hostel buildings of Tribal Welfare Department, A.P. – Permission – Orders –Issued.

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3. Basing on the information provided by Spl. CTW, Vijayawada, the EESL, New Delhi has furnished the following quotation.

New Item	**Per unit Watt, W**	**New Annual Energy kWh**	**New Annual Energy KVAH**	**Annual Savings KVAh**	**Apportion-ed monthly**	**Apportion-ed Monthly**
Proposed Fixtures/Fans					Calculations	
20W LED Tube Light	20	926304	926304	1482086	123507	899132
LED Bulb 9W	9	384847.2	384847	2180801	181733	1323019
50W Energy Efficient Fan	50	4725000	4725000	1890000	157500	1146600
20W LED Light	20	217774	217774	348438	29036	211386
40W LED Light	40	273487	273487	307673	25639	186655
Grand total of new Energy Consumption (KB-1, KB-II, KB-III)			**6527412**	**6208998**	**517417**	
Tariff			**7.28**			
New Annual Cost Estimation			**47519559**			
Difference in KVAH		6208998				
Difference in cost estimated		45201506				

TRIBAL WELFARE DEPARTMENT					
S.No.	**Existing fixtures**	**New fixtures**	**Number**	**Unit Rate**	**Total Rs.**
1.	40W tube light	20W LED tube light	19298	355	6850790
2.	60W Incandicent bulb	LED bulb 9W	17817	100	1781700
3.	Ceiling fan	50W Energy Efficient Fan	22500	1500	33750000
4.	Outdoor light 40W	20W LED light	2486	1621	4029806
5.	Outdoor light 70W	40W LED light	1561	2533	3954013
	Grand total Material chargess				50366309
	EESL admin.and PMC charge for 3 years contract @20%				10073261.8
	TOTAL ESTIMATED COST				60439570.8

BOQ of TWD			
Functional Area	**Existing Fixtures**	**Proposed Fixtures/Fans**	**Total**
Tube lights			
Indoor Lights	40W Tube Light	20W LED Tube Light	19298
	60W Incandicent Bulb	LED Bulb 9W	17817
Outdoor Lights/Funs			
Outdoor Lights	Ceiling fan	50W Energy Efficient Fans	22500
	Outdoor light 40W	20W LED Light	2486
	Outdoor light 70W	40W LED Light	1561
			63662

S.No.	HEAD	UNIT	VALUES
1.	Estimated Energy Savings	KVAh	5114751.408
2.	Fixed Tariff, Rs.Per KVAh	Rs. per KVAh	7
3.	Estimated Annual Cost Savings w.r.t Electricity bills	Rs. per year	35803259.86
4.	AMC getting free for Client on Air Conditioning is Rs.800/ AC/Annum	Rs. per year	0
5.	Total cost savings(S.No.3+Sl.No.4)	Rs. per year	35803259.86
6.	Investment, Rs.	Rs.	50366309
7.	EESL PMC fee	Rs.	10073261.8
8.	Estimated Capital cost of the Project	Rs.	60439570.8
9.	Unit Portion (20% of Capital Cost)	Rs.	12087914.16
10.	Return on Equity 23.7% per annum	Rs.	5143500.886
11.	Debt Portion (80% Cost of capital)	Rs.	48351656.64
12.	Debt interest (11% per annum)	Rs.	9071956.275
13.	Total estimated repayment to be made by TWD to EESL (9+10+11+12)	Rs.	74655027.96
14.	Contract Period	Years	3
15.	Payout to EESL annually (13/14)	Rs.	24885009.32
16.	EESL share(15/5)	%	0.695048703
17.	EESL Quarterly repayment	Rs.	6221252.33
18.	No. of repayments	Quarterly	12

4. The Spl. CTW, Vijayawada has further informed that it is informed by the EESL that the period required for replacement of the equipment is 4 months from the date of commencement of the work. The cost of the equipment will have to be paid in 12 installments along with GST @18% from the amounts saved on electricity charges.

5. The Spl. CTW, Vijayawada has further stated that as per the draft "Energy Performance Agreement between TW Department, AP and APSEEDCO and EESL", the equipment ownership features, financing to implement the project, savings after implementation and method of payment etc. are as follows:

- **Energy Management Plan:** The walk through energy audits (inventory collection) of the said building have been completed and mutually vetted by Tribal Welfare Department, APSEEDCO and EESL, with EESL having accepted implementation of energy efficiency measures at the said building on deemed ESCO model. In this model, **EESL will arrange the capital investment for project implementation upfront and get repaid over a period of 3 years through equal annuity repayments apportioned in quarterly instalments** as contained in this agreement for the building project and APSEEDCO will act as project Management Consultancy (PMC).

- **Ownership of Existing Equipment:** Ownership of equipment's presently existing at the Premises at the time of execution of this Agreement shall remain the property of TRIBAL WELFARE DEPARTMENT. TRIBAL WELFARE DEPARTMENT's administration department shall be responsible for custody of same and designate the location and storage for any equipment and materials that are replaced.

- **Ownership of New Equipment:** The new equipments under this project shall be property of EESL till the end of the Agreement period. On the conclusion of the Agreement, EESL shall transfer ownership rights to the TRIBAL WELFARE DEPARTMENT without any cost to TRIBAL WELFARE DEPARTMENT, along-with warranties as maybe available, if any. Additional warranties will be an account and cost of TRIBAL WELFARE DEPARTMENT.

- The term of this Agreement shall be THREE (03) years beginning with the effective Date. The Tribal Welfare Department **shall incur no cost during the contract period** for Equipment service and repairs except for reasons attributable to the negligence or misconduct of any staff/ labor/ agent of TRIBAL WELFARE DEPARTMENT at the premises of building covered under this agreement. EESL shall charge TRIBAL WELFARE DEPARTMENT for the actual cost of the additional maintenance or repair insofar as such cost is not covered by any warranty or insurance proceeds. EESL will only be liable for the proper functioning and repair thereof as maybe required for only the items implemented by EESL for the contract period of 03 years and does not cover issues related to supply, wiring/cable faults, voltage surges/transients, theft of equipment etc. which shall be on account of TRIBAL WELFARE DEPARTMENT only.

- Once Tribal Welfare Department, APSEEDCO and EESL have agreed to enter into this Agreement for the execution of the "Implementation of Energy Efficiency Measures at School and Hostel buildings in Andhra Pradesh on **100% financing provision by EESL with deemed energy cost savings to be shared in the ratio** as mentioned in Attachment – 3 **between EESL and Tribal Welfare Department respectively** for the buildings subject to and on the terms & conditions set forth hereinafter for a period of 03 years.

6. The Spl. CTW, Vijayawada has requested the Government to issue necessary orders for replacement of electrical equipment with Energy Efficiency equipment in all the Schools and Hostel Buildings of TW Department.

7. After careful examination of the proposal, Government hereby accord permission to the DTW, Vijayawada for implementation of Energy Efficiency Project in all the School and Hostel buildings of Tribal Welfare Department and to enter into the agreement with APSEEDCO and EESL on the terms and conditions mentioned above.

8. The DTW, Vijayawada shall take necessary action accordingly.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

R.P. SISODIA
PRINCIPAL SECRETARY TO GOVERNMENT (TW)

To
The Director, Tribal Welfare, AP, Vijayawada.
The APSEEDCO, Vijayawda.

Copy to:-

The P.S to Hon'ble Minister, SWE & TWE, AP.
The P.S. to Principal Secretary (TW).
The PA to Joint Secretary (TW).
SF/SC.

//FORWARDED BY ORDER//

SECTION OFFICER